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The Washington SPECTRUM

Volume 1, Issue 1 December 2000

Sakai Named Program Director

George Sakai was recently named Program Director of the Office of Spectrum Policy and Management (ASR-1).

As Program Director, George Sakai ensures that adequate spectrum is available for safe and efficient operation of the National Airspace System (NAS) by developing and implementing an overall national aeronautical radio spectrum policy, frequency engineering criteria, and standards. Sakai provides guidance and support to the regional Frequency Managers to resolve radio frequency interference and conduct radiation hazard measurements.

After serving as a spectrum engineer and NAV/COM maintenance and operations engineer for Airway Facilities in the Central and Great Lakes Regions, Sakai transferred to AF Headquarters in 1979. He became Deputy Program Director of ASR in 1988.

Sakai earned a Bachelor of Science degree in Nuclear Physics from the University of Kansas in 1970 and completed one year of graduate course work in Electronic Engineering in 1971.

Sakai and his wife Ruby have four children and live in Spotsylvania, Virginia. His hobbies include ham radio.

George Sakai, Program Director

ASR Represents U.S. Civil Aviation at World Radiocommunication Conference 2000

Engineers from ASR recently represented the interests of the United States (U.S.) civil aviation community at the World Radiocommunication Conference 2000 (WRC-2000). Among the 2037 participants in this year's conference were Robert Frazier, Michael Richmond and Donald Willis of the Spectrum Planning and International Division (ASR-200). Program Director, George Sakai, was also in

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News from the Regions

Western Pacific Region

Nguyen is National / Regional Winner

Nico Nguyen was honored on August 2 for his dedication and contribution to Spectrum Management. Before a crowd of nearly 200 people gathered in the Triangle Room of the Western Pacific Regional Office, Nguyen was awarded the Star of Excellence Award. Nguyen was further honored November 2 at the FAA Headquarters as the National Winner of the 20/20 Foresight Award. Mr. Nguyen's recognition for the 20/20 Foresight Award is largely due to his conception, design and implementation of the Spectrum Management Automated Radio Transmitter (SMART) Direction Finder (DF) System.

The SMART DF system represents a huge leap forward for interference resolution technology in the creation of a state of the art system at a fraction of the cost of already existing systems

Nico Nguyen in the control room of the SMART DF System

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attendance, as well as Jim Hefty from the National Airspace Operations Control Center and Ted Davies, Program Director for Research and Acquisitions International (ASD-500).

Frazier, Richmond and Willis were among the delegates charged with bringing the interests of the U.S. aviation community to this international table. Foremost in the interests of the U.S. were issues related to the Global Positioning System (GPS). This popular system is currently being incorporated into various modes of transportation and is believed to be the future of navigation. Commenting on the success of the endeavor, Michael Richmond said, "We accomplished all of our goals."

The aviation community has been among the most significant benefactors of this technology because of its flexibility and worldwide applicability.

Pictured left to right: (Seated) Ted Davies / ASD-500, Ambassador Gail Schoettler (head of U.S. delegation), ICAO Council President Assad Kotaite, and Judimar Chargas, ICAO head of CNS/ATM. (Standing) Robert Frazier, Michael Richmond and Don Willis, all of ASR-200.

ASR-200's Frazier, Richmond and Willis Recognized for Achievement

In an All-Hands meeting of the Spectrum Engineering staff on September 14, Robert Frazier, Michael Richmond and Donald Willis were recognized for their outstanding efforts as participants of the FAA delegation to the 2000 World Radiocommunication Conference (WRC-2000). Congratulations to these three for a job well done!

Frequency Coordinators
by
Terri Marshall, AWP-475

Frequency Coordinators are designated technical employees in each Western-Pacific SMO who share in a variety of duties. Among their responsibilities are the maintenance of NAS equipment, trouble-shooting NAS equipment problems and, on some occasions, supporting NAS installations. In addition, they share the collateral duty of responding to Radio Frequency Interference (RFI) in their SMO's area. They also provide and validate frequency information for Spectrum Management Analysts and Engineers.

Many of the SMO Frequency Coordinators are seasoned technical employees, some with over 20 years of technical experience. When asked about a typical week, Wray Freitas of SRN SMO, an engineer and Sector Frequency Coordinator, responded, "Busy, very busy. One day I am in Prescott, AZ, troubleshooting an ILS problem and the next day I may be in Las Vegas, NV, on a RFI call." Wray's response is typical of most Frequency Coordinators.

There are six primary Frequency Coordinators in the Western-Pacific Region: Romeo Primicias, Golden Gate (GGA) SMO; Wray Freitas, Sierra Nevada (SRN) SMO; Steve Herbst, Desert-to-the-Sea (DTS) SMO; Jerry Sanchez, Pacific-Desert (PDS) SMO; John Goring, ZLA ARTCC; and Juan Ramirez, ZOA ARTCC.

Election 2000

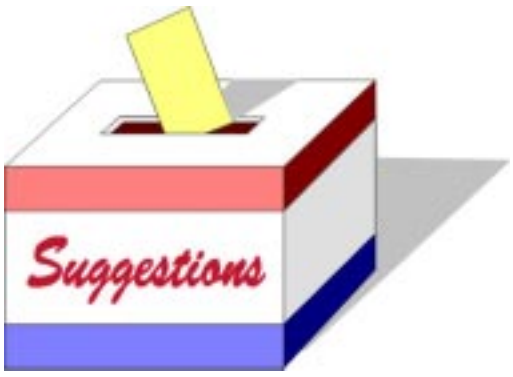
Frequency Management Officers Prepared for Challenges Posed by Democratic National Convention

Armed with information gathered after the Republican National Convention, Frequency Management Officers in the Western Pacific Region were prepared for possible jamming to police frequencies from protesters and subversives during the Democratic National Convention.

The convention, held in Los Angeles from August 14-17 at the Staples Center, drew the attention of many Governmental agencies, including the spectrum management community. Spectrum Management & Radar Automation Section, AWP-475, was alerted by the Secret Service, FBI, Airport Enforcement, FAA Security, and Air Traffic of a possible threat to aviation frequencies, operations, and facilities during the convention. While the expected 40,000 demonstrators failed to materialize, city and Governmental officials were nonetheless prepared ensuring that city operations as well as the convention would continue to function smoothly.

RFI Resolution Training Concludes for FY 2000

RFI Resolution Training classes came to an end for FY 2000 with the August 22-29 session. Throughout the course of the year, five classes were held with 12 students per class. This year ASR trained 60 FAA field specialists. This training is sponsored through the Capital Improvement Program to equip field personnel with the tools to resolve RFI problems within the NAS. In the last seven years we have trained over 350 field specialists, and their support in our mission to provide an interference-free NAS has been invaluable. Four classes are currently being planned for FY 2001.



Please send your ideas and suggestions for the Washington *SPECTRUM to:*

Robert.G-CTR.Drew@faa.gov

ASR in the News

Request for Mission Analysis of the National Airspace System (NAS) Interference Detection and Locating Capability

Personnel from the Office of Spectrum Policy and Management (ASR) are working to develop a national program for a real-time interference detection, location and mitigation capability for the NAS. This program will provide both current and future NAS aeronautical radionavigation services (ARNS) and communications services protection from intentional and unintentional interference, including protection to the Global Positioning System (GPS). Both GPS, and its augmentation systems, the Wide Area Augmentation System and the Local Area Augmentation System, fall under this program. A request for mission analysis has been submitted. We are expecting approval from the Joint Resource Council in FY-01.

The Office of Spectrum Policy and Management (ASR), Provides Hands-On Demonstration to the United Kingdom (UK) National Air Traffic Services (NATS)

While hosting the NATS visit to the Western -Pacific Regional Office (AWP), personnel from ASR, Aviation Systems Standards, AVN, and AWP-400, provided a demonstration of the Interference Monitoring Detection System (IMDS), Navigational Aids Signal Evaluator Radio Frequency Interference (NASE/RFI), and the Los Angeles Fixed and Transportable Interference Monitoring Detection Systems. A RFI simulated source "real-time" triangulation demonstration was provided with the Fixed IMDS. In addition, the Transportable IMDS was showcased and hands-on demonstrations were provided. NATS representatives shared the privatization efforts currently under way within the UK's Civil Aviation Authority. They rated the United States IMDS as a potentially valuable system to evaluate in their efforts to maintain safety within their infrastructure services. The visit concluded with a tour and overview of the Southern California Terminal Approach Control facility in San Diego.

Submissions

The Washington *Spectrum* is interested in your submission. Please send news items, articles, photos, etc. electronically to: Robert.G-CTR.Drew@faa.gov

The Office of Spectrum Policy and Management (ASR), Takes Lead in the Global Navigation Satellite System Panel (GNSSP) Spectrum Subgroup Meeting

Mike Biggs (ASR-200) led the United States (U.S.) delegation to a meeting of the International Civil Aviation Organization (ICAO) GNSSP Spectrum Subgroup. The meeting was held July 18-20, 2000, in London, England, and focused on development of a work plan to support vital GNSS spectrum issues on the agenda for the 2003 World Radiocommunication Conference. Of particular note were tasks to develop limits to ensure protection of existing aeronautical radionavigation systems, and devise a strategy to best protect Very High Frequency augmentation data links from radio frequency interference due to commercial broadcast services. ASR took the opportunity to inform the group about ongoing efforts in the U.S. to study impacts on aeronautical services from proposed ultra-wideband (UWB) transmitters. The group expressed great interest in the UWB material, recognizing that approvals in the U.S. would likely lead to pressures to introduce the UWB systems abroad.

ASR in the News

The Office of Spectrum Policy and Management (ASR), Hosts the Next-Generation Air/Ground Communications (NEXCOM) Regional Spectrum Management Meeting

ASR hosted the fourth meeting of the NEXCOM Regional Spectrum Management Team at the William J. Hughes Technical Center (WJHTC) from September 26 to 28. Members of ASR, MITRE, WJHTC, Great Lakes, Central, and Southern Regions attended the meeting. The team had four primary objectives: (1) potential for Regional use of the MITRE Spectrum Transition/ Prospector Tool, (2) evaluation of the WJHTC NEXCOM test facility, (3) finalization of Version 1 of the plan to transition from today's air-ground system to the NEXCOM, and (4) develop "Strategy for Survival" until 2009. All objectives were achieved, with very positive participation by all in attendance. Of particular significance was the completion of Version 1 of the NEXCOM Transition Plan. This is a dynamic plan that will of necessity change as the NEXCOM Program progresses, but Version 1 captures the plan's components, validates feasibility, and establishes a baseline. A second milestone was the development of a strategy for satisfying air traffic control spectrum requirements until NEXCOM is operational in 2009. Twenty three innovative methods for stretching the scarce air-ground channels were suggested. The team felt that all 23 suggestions must be thoroughly investigated and implemented to their fullest in order to satisfy the National Airspace System requirements and expansion until NEXCOM becomes a reality.

Radio Frequency Interference (RFI) Affecting the Emergency Frequency 121.5 MHz at Fayetteville, Arkansas is Resolved

The RFI caused by the University of Arkansas' new SmartVision scoreboard system has been mitigated. The RFI was affecting the emergency frequency 121.5 MHz at the Jonesboro, Arkansas remote transmitter site and the Search and Rescue Satellite Network at Langley Air Force Base. The interference was caused by the Smart Vision scoreboard's video processor system producing spurious emissions on the emergency frequency. The manufacturer is pursuing completion of the work on the system to bring it in compliance with the Federal Communications Commission Part 15 requirements.

The Office of Spectrum Policy and Management (ASR), Supports Western Fire Fighting Efforts

The worst forest fires in the last 50 years have been burning thousands of acres of forest and timber in the Western United States. Fighting them has been a joint effort for Federal Government firefighters, the military, and personnel from civilian fire companies across the nation. ASR and the regional frequency management offices have made a significant contribution to this effort by providing air-to-ground frequencies on an "as needed" basis to supplement the many fire fighting frequencies already coordinated for this fire season. As more fires are reported in areas where frequencies have not been previously coordinated (and containment efforts move to those areas), ASR will remain on 24-hour standby to assign aeronautical frequencies for coordination of water drops, personnel movement, aircraft movement, etc., in the problem areas.

ASR in the News

The Office of Spectrum Policy and Management (ASR), Meets with Representatives of the Kohler Corporation

The Kohler Corporation has requested a waiver to the Federal Communications Commission rules on low power electronic devices to allow transmission in restricted bands. These bands are used by the FAA for critical aviation safety systems. Kohler is seeking a waiver to allow them to manufacturer and market a toilet ventilating kit that uses ultra-wideband technology. Since the testing of ultra-wideband devices has not yet been completed, the Federal Aviation Administration (FAA) had responded to the request by recommending that only 5,000 such devices be sold until their impact could be fully assessed. Kohler asked for a meeting with the FAA to determine if a larger number of the toilet ventilating kits could be sold. The meeting included representatives from Airway Facilities and the Office of Government and Industry Affairs. The FAA agreed to review data, which is being collected by the National Telecommunications and Information Administration in an overall analysis of the impact of ultra-wideband technology to existing systems. After this review the FAA will determine if more of these devices could be allowed under the waiver.

The Office of Spectrum Policy and Management (ASR) Brief a Congressional Staff Member on the Status of a Determination of Hazard to Air Navigation

Personnel from ASR and representatives from the Office of Government and Industry Affairs, AGI, and Airspace and Rules Division, ATA-400, met with Mr. Randall Popelka (a staff member of Senator Conrad Burns). This meeting was in regard to the appeal on a Determination of Hazard to Air Navigation issued to an FM broadcast station owned by Alpine Broadcasting at Island Park, Idaho. Alpine Broadcasting had started operating the FM station in spite of repeated warnings by the Federal Aviation Administration (FAA) that doing so would interfere with air traffic control frequencies located at the Ashton, Idaho radar site. Senator Burns had requested that the FAA brief Mr. Popelka on the background of this airspace case and the delay the FAA was having in reaching a determination on the appeal. At the meeting, Mr. Popelka was briefed on the events leading to the determination. In turn, he asked questions on the difficulties of maintaining a high altitude site, the air traffic control frequency plan, the airspace case process, and the options available to Alpine Broadcasting if the Determination of Hazard should stand. Mr. Popelka was satisfied with the information that was presented. The conditions which necessitated the original frequency change are still present. We are pursuing resolution through both the proponent and the regional office in order to restore radar service on the appropriate frequency.

The Office of Spectrum Policy and Management, ASR, Continues to Protect Aeronautical Spectrum

Title VI of the Omnibus Budget Reconciliation Act of 1993, authorized the Federal Communications Commission to use competitive bidding for the reassignment of Federal radio spectrum to the private sector. Included in this reallocation was the 1710–1755 MHz band used by the Federal Aviation Administration (FAA) for Low Density Radio Communications Links (LDRCL). The FAA has a total of 90 frequency assignments remaining in this

ASR in the News

band that need to be reallocated to the 7125-8500 MHz band at an approximate cost of $20M. To assist Federal agencies in funding such moves, which benefit the private sector, Congress passed the Strom Thurmond National Defense Authorization Act in 1998, which authorized Federal entities to accept compensation payments from the private sector. ASR is coordinating with General Counsel and the LDRCL program office to ensure the reimbursement procedures being developed by the National Telecommunications and Information administration will accommodate FAA requirements.

Office of Spectrum Policy and Management Supports the Alaska Capstone Program

Mike Biggs (ASR-200) supported a Capstone Open House hosted by the Capstone Program Office in Anchorage, Alaska. He participated in a "round table" in which a panel was questioned by the public regarding the Capstone effort. Members of the panel included Steve Brown, ATS-1; Chris Hart, ASY-1; John Hallinan, Capstone Program Manager (Alaska Region); Doug Helton, AOPA; and representatives from Flight Standards and Aircraft Certification. Mike fielded questions regarding the availability of radio frequency spectrum for the Universal Access Transceiver (UAT), a key element of Capstone. Currently, there is concern that the UAT may be interfered with by the Department of Defense (DOD) Joint Tactical Information Distribution System/Multifunctional Information Distribution System (JTIDS/MIDS). Mike stated that the issue was being addressed at very high levels within the Federal Government and that commitments had been given for early resolution. Soon after this Capstone Open House, ASR successfully negotiated frequency assignments for Capstone by addressing DOD concerns that interference to UAT by JTIDS/MIDS would not impact DOD Alaska training operations

Special Thanks

The Washington *SPECTRUM* wishes to etxend a note of thanks to all those who contributed to the current issue:

Sydney Bradfield,	**AWP-475**
Marie Mader,	**ASR-100**
Terri Marshall,	**AWP-475**

RFI of the Month

Radio Frequency Interference (RFI) Affecting the Springfield, Illinois Air Traffic Control Tower (ATCT) Frequency 121.3 MHz is Resolved

Personnel from the office of Spectrum Policy and Management (ASR), in conjunction with the Federal Communications Commission (FCC) assisted the Great Lakes Region, AGL, Frequency Management Office in resolving a severe RFI problem affecting frequency 121.3 MHz. The RFI was affecting Springfield Airport ATCT operations to runway 31. The source of the RFI was located and identified as a "Pirate" FM broadcast station that was generating spurious emissions in the aeronautical communications band. The FCC, acting on a letter from FAA indicating the potential safety-of-life situation, proceeded to confiscate the illegal transmitter. The tower frequency was returned to service with no additional reports of RFI.

Happy Holidays

from the Office of

Spectrum Policy and Management